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Q&A with the Grants Director

NIH: Grantees, Applicants Face Rising Confusion

"All hope abandon, ye who enter here," is not inscribed over the entrance of perhaps the least-known but most influential administrative arm of the National Institutes of Health, the Division of Research Grants (DRG). But the gloomy words almost fit. The DRG receives and sorts the project-grant applications that flood into NIH—32,000 last year—and it is homebase for the study sections that produce the make-or-break scores for most of these proposals. From the hopeful mass of applications, some 90 percent are rated high, but only 20 percent end up in the charmed group of "approved ***and*** *funded."*

The DRG has been headed since last January by Jerome G. Green, a physician-researcher associated with NIH since the early 1960s. At the time of his appointment, Green was serving as Director of Extramural Affairs at the National Heart, Lung, and Blood Institute. Green spoke August 15 with SGR editor Greenberg. Following is the transcript, edited by SGR.

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SGR. *By many accounts, this is an unusually confusing and uncertain period for researchers who depend on NIH support.*

Green. Yes. The reason is that the degree of flexibility at NIH has markedly decreased. Things come to us with more instructions, earmarks, specific mandates—from Congress, the Department [of Health and Human Services], from OMB [Office of Management and Budget]. For example, Congressional legislation says that the institutes should award at least 6100 grants. And an instruction then comes from the Administration indicating thou shalt not award more than 6100 grants. In a burst of creative administration, you award exactly 6100 grants.

There are good reasons for these various positions, but in terms of senior scientists within NIH who are trying to do their best as "investment counselors," the constraints are severe. You also have the fiscal constraints, so that if you're going to meet some of these instructions, and if the dollars are not entirely adequate, you are forced into a "negotiated" reduction between NIH and the grantee.

SGR. *How does that work?*

Green. It gets to be pretty unilateral. It's not what you'd ordinarily think of as a negotiation. It is a negotiation in the sense that it's not an ax across the board in which everything will be cut a like amount. Still, that's created a lot of the confusion. Scientists read about Gramm-Rudman requiring 4.3 percent cuts in federal spending, and their particular grant may indeed have been cut by 12 percent. But that's because there are other factors involved, like institutes trying to achieve a particular number of grants.

It is a confusing time for the folks outside. The situation that we report at any moment may depend on when a grantee or applicant happens to call us. If he or she calls when we're in that 90-day "window" within which a rescission was proposed, then we don't know whether we have that additional money or not.

SGR. *Does that mean NIH is required to relinquish*

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Pork-Barrel Politics: How MIT Plays Capitol Hill—Page 8

In Brief

The nomination of William R. Graham to be presidential Science Adviser has finally gone to Congress—nearly 10 unexplained weeks after the White House announced he was the choice for the long-neglected job. Graham, who has been serving as Deputy Administrator of NASA, is scheduled for a confirmation hearing September 11 before the Senate Committee on Commerce, Science, and Transportation.

SGR hears that the ranking Democrat there, Ernest F. Hollings (SC), plans to grill Graham about his early assurances that warnings had not preceded the launch of the Challenger shuttle. But confirmation is considered a certainty. The presidential science job has been without a full-fledged appointee since January 1, and budget for supporting staff has been sharply reduced—which means that White House staff boss Don Regan is not hot for science advice.

From a just-completed, NSF-supported national survey by the National Science Teachers Association: No physics courses at all in nearly 30 percent of the nation's high schools; no chemistry in 17 percent; no earth or space science in 70 percent, and no biology in 7 percent. When schools with none of these courses are added to the schools with merely one course, the figures at least double.

Weicker to Head New Biomedical Ethics Board

The Biomedical Ethics Board that was set up last year within the Congress has been moving at a leisurely pace in getting itself organized and into business. The main events so far are the appointments of the 12 members—equally divided between the two houses and the two major parties—and the selection of Senator Lowell P. Weicker Jr. (R-Conn.) as Chairman and Rep. Willis D. Gradison Jr. (R-Ohio) as Vice Chairman. The posts were filled July 30, at the Board's first and, so far, only meeting.

The other members are, from the Senate, Democrats Albert Gore Jr. (Tenn.), Edward Kennedy (Mass.), and Dale Bumpers (Ark.), and Republicans Gordon Humphrey (NH) and David Durenberger (Minn.). House Democrats are J. Roy Rowland (Ga.), Henry Waxman (Cal.), Thomas A. Luken (Ohio); the other Republicans are Thomas Bliley Jr. (Va.) and Thomas Taukey (Iowa).

The Board was chartered to preside over Capitol Hill's own think tank on "ethical issues arising from the delivery of health care and biomedical and behavioral research." As such it is a spiritual descendent of the expired President's Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioral Research. Following a prodigious output of reports, the Commission went out of business by prearranged schedule in 1983. Efforts to establish some sort of successor body at a national level were opposed by the Reagan Administration, which looked with suspicion on mucking around about ethical issues; after long wrangling on Capitol Hill, the Board was created as a creature of the Congress.

The next step on the Board's schedule will be the appointment of a 14-member, part-time Biomedical Ethics Advisory Committee to "conduct the studies and make the reports" that will be issued by the Board. The founding legislation specifies that the Advisory Committee, appointed by the Board, shall consist of:

- Four members "distinguished in biomedical or behavioral research."
- Three who are "distinguished in the practice of medicine or otherwise distinguished in the provision of health care."
- Five who are "distinguished in one or more of the fields of ethics, theology, law, the natural sciences (other than the biomedical or behavioral sciences), the social sciences, the humanities, health administration, government and public affairs."
- Two "who are representatives of citizens with an interest in biomedical ethics but who possess no specific expertise."

After the Advisory Committee is appointed, it will select a full-time Executive Director. With the approval of the Committee, the Director will select a staff.

There's vague word that these matters will be attended to early this month, but with Congress in turmoil over budgetary matters and election day looming, that's not certain. At present, the business of putting together the various appendages of the Board is being attended to on a part-time basis by staff assistants of several Board members. One gets the impression that they are busy enough with the frantic pace of Congress's normal business.

The tasks specifically assigned to the Board include preparation of an annual report "identifying areas, programs, and practices of medicine and biomedical and behavioral research which have significant ethical implications." In addition, once the organization has been completed, the Board will have 18 months to produce a report on "research and developments in genetic engineering (including activities in recombinant DNA technology) which have implications for human genetic engineering."

Since the Board is a minor operation in the grand scheme of legislative affairs, and the Advisory Committee will inevitably be composed of over-committed mandarins, many from far away, the Biomedical Ethics Board will, as a practical matter, be run by its staff. But overlooking that staff, as members of the Board, will be some of Capitol Hill's most influential figures on medical and research matters. Board Chairman Weicker is also the generous Chairman of the Appropriations Subcommittee for the National Institutes of Health; Senate freshman Gore made a name for himself as a skeptical overseer of genetic engineering and biomedical research while serving in the House, and is continuing that role in the Senate; Kennedy has been generally remote from biomedical issues since Republican control of the Senate cost him the chairmanship of the Labor and Human Resources Committee, but he knows the issues well.

Among House members, Vice Chairman Gradison is the ranking Republican on the Ways and Means Health Subcommittee, and Waxman chairs the Energy and Commerce Health and Environment Subcommittee.

As for prickly political issues, there are plenty of them within the Board's statutory jurisdiction—from abortion to disposal of surplus frozen embryos, along with genetic screening, and release of genetically engineered products.

. . Only Top Scores Rate Chance of NIH Funding

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money that it thought would be available for spending?

Green. A rescission is a proposal on the part of the Administration; it requires concurrence by both houses of Congress, and there's 90 days to do that. There are all kinds of problems in terms of how do you define the 90 days. Working days? Do weekends count? Does a recess count? There have been 90-day periods, as there was this year, in which we didn't know whether we had the money or not. The 90 days expires, and you suddenly have the money.

SGR. *Are there uncertainties remaining about whether all the money appropriated for this year will actually be available for spending?*

Green. The Gramm-Rudman sequestration has occurred—4.3 percent. The rescission that was proposed has failed. NIH is going ahead firmly with—the latest figures show—6073 new and competing grants; that's the number available after the sequestration. The total number of research project grants is 18,649. That's a record high.

A Promise is a Promise—But

SGR. *What firm ground can be assumed by a faraway grantee who is not acquainted with the peculiarities of federal budgeting?*

Green. If the grantee has a firm promise [of support] he's in good shape. He may not get all of the funds that he thought he was going to get or all of the funds that were favorably recommended by the study section and the [institute] council. But if a grant has been officially awarded, the investigator will receive support, though a negotiation may lead to some reduction.

SGR. *Is the competition stiffer than ever?*

Green. Yes. You've got to be in the upper two deciles in the distribution of priority scores if you're really going to have a reasonable shot at getting funded. I think there's a large group of applicants out there who do not realize that the essential part of the peer-review system occurs when we mail out the applications to reviewers all over the country. They're at home in their own work places. They take about three or four weeks to read over these proposals.

But they're doing it, for the most part, at home in the evening, on weekends, or in the laboratory. It's terribly important to make their job easy—to think about this poor guy reading it at 10:30 at night, and he's tired and suddenly as he looks at this thing, it's obvious that it doesn't add, or there are things in this budget which were just not mentioned in the application. The other thing is the scientific rationale—to make absolutely certain that the methodology really is addressed to the hypothesis.

Most get into the favorably recommended category—almost 90 percent now are favorably recommended. To a large extent, that approval rate is so high because fully a quarter of the applications submitted are resubmissions from people who are trying to improve that competitive position. Some applications are the fourth revision—the fifth submission of that project.

Fast Rise in Indirect Costs

SGR. *How has the amount per grant been affected?*

Green. It varies among institutes and types of activities, but overall, in 1980, an average research project grant was $100,000—$70,000 for direct costs, $30,000 for overhead. In 1985, the average size of a grant was $150,000—$100,000 for direct costs, $50,000 for indirect costs. So, there's a great deal of concern about the growth of indirect costs.

SGR. *How does the DRG decide which study section and institute to assign an application to?*

Green. There is a triage function right here in the Division. We have a group of 11 or 12 health-scientist administrators who look at the applications, and they make two assignments: They refer it to a study section for review and they decide, if, indeed, an award is made, which institute should it go to. There are published guidelines that the officer uses to refer the applications.

SGR. *Since some institutes are richer than others, do you find applicants pitching for a particular decision?*

Green. Yes. I think it's unfortunate when investigators look at the budget tables and try and tilt their applications toward individual institutes in the hopes of gaining funds. It leads to distortions of their own intent

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. . . Gamesmanship Showing up More in Proposals

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and generally to more problems for them.

SGR. *Is more of that going on?*

Green. There's an inquiry that I'm hearing more often: An investigator says, I'm preparing my application and I think I could tilt it toward child health or heart, or maybe even neurology. Where is the greater availability of funds?

SGR. *Is there more gamesmanship going into the applications these days?*

Green. Applications are longer, people are trying to forestall and answer every particular kind of question that might arise. On a renewal [application], some applicants are thinking, my application last time went to study section X, I think it's probably going to go there again this time. I know of people who look up the roster to see who's on the study section, and who tilt their application with the bibliography, making sure that they refer to a couple of people on the study section and their work.

There's some gamesmanship in terms of splitting proposals—putting in two applications where [previously] they would have put in one. The strategy is the old saw, "Don't put all your begs in one askit"—a modest-size request of $45,000 in two applications, rather than $80,000 in one. They've got to report in the application all current support and all pending applications. So, we see it, but the point is that in some instances, a study section is only seeing one of the applications, the other one went someplace else.

SGR. *With a record number of grants in force, you have a heavy commitment of available funds. Doesn't that make it difficult for newcomers to break into the system?*

Green. There's a balance of concerns. What you're doing is providing stable support to a very select group of investigators who have been able to compete successfully. There's been increasing concern about [the pre-

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How the Congress Takes Part in Decision-Making at the NIH

Capitol Hill's directives to NIH range from the statutorily explicit to the utterly vague, but, as DRG Director Jerome Green indicates in the accompanying Q&A, they place Congress squarely inside the decision-making process at Bethesda.

The legislators often pursue their biomedical interests by writing directions into the reports accompanying appropriations bills. The legal validity of this prose—which is not part of the laws passed by Congress—is sparse to non-existent, but it's a foolish agency that doesn't take it seriously. Sometimes, in fact, agencies take it very seriously because they collaborated with the congressional authors to get the language into the report for one purpose or another of bureaucratic infighting.

In other cases, the words originate with a lobbying organization that aims to push the agency in a direction it prefers not to go. Since NIH is surrounded by a melange of constitutencies with designs on its great wealth, its appropriations reports reflect all kinds of ploys and designs.

The latest report of the House Appropriations Subcommittee for NIH is riddled with decrees, advice, and suggestions. It states, for example, that "The Committee . . . intends that the amounts in the bill should be used to fund full direct and indirect costs of no fewer than 6200 new and competing renewal awards in approximately the amounts recommended by peer review groups." In regard to staff at NIH, the report murkily states that the 1987 funds "should support at least 13,500 full-time equivalent positions." It also expresses concerns about reports of staff shortages at the NIH Clinical Center, and "requests" the NIH Director to submit a report on that subject by January 1.

Vague suggestions abound in the NIH Appropriations Report. Declaring that "The fundamental questions of basic sleep research have yet to be addressed," the Committee adds that it "believes that NIH should give more attention to sleep research. Therefore, the Committee requests the Director of NIH to consider creation of a trans-institute advisory committee to coordinate NIH policy on this important area of research."

The individual institutes regularly receive nonstatutory kibitzing from their appropriations committees. In the latest House report, the Cancer Institute is told that "The Committee recommends that increased appropriations be used to continue current efforts in environmental and occupational epidemiology through inter-agency agreements and contracts for intramural research."

Advice for the National Institute of Diabetes and Digestive and Kidney Diseases covers many points. There's a recommendation for "a study of the Hispanic population and the risk factors for diabetes among this population." And the Institute is also advised to "consider the establishment of an oversight panel . . . to monitor the development, distribution and use of growth hormones."

. . . Stringencies Lead to Approved but Unfunded

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ponderance] of two- and three-year grants. For the individual who has an excellent track record and who has been able to come in time after time over the years and compete successfully, it seems a waste of his time and the review time at NIH; it adds instability in his laboratory.

For the new investigator who's coming along, fully trained, he or she gets the three-year award, but a year and a half from now, will have to submit a competing proposal. That young individual is going to be encouraged because of that short duration to take the lowest risk possible, to make sure that he or she can get two papers into some reasonable journal—whereas, with longer, more stable support, the investigator may try something more innovative and creative.

Programs for Beginners

That's why NIH has launched these new programs—the Merit Award, for the investigator with an outstanding track record, and the first award for the well-trained individual who's on his or her fledgling flight as an independent investigator. The first award program will provide a 5-year award, almost invariably, and would average $70,000 a year. They're in the regular competitive pool. There is no set-aside for the funds. They'll compete with regular project grants. The first deadline date was June 1. The applications will be reviewed in September and October, and awards will be made in fiscal '87 [which starts October 1].

The first-time-ever applicants do roughly about 10 percent better in terms of obtaining support than investigators who are coming in for a new grant but had support before. If you're coming in for a competing renewal on the same project, one would expect that you'd do much better—you went through the hurdles before, you had support, and you have data to show that you've been working hard and well. The competing renewal grants do well; their approval rate is well over 90 percent.

SGR. *There's a lot of frustration expressed about the designation "approved but unfunded."*

Green. Part of the problem with that is that there are investigators on the outside who get their summary statement [a report from the study section that reviewed their application]. They see that they were favorably recommended. They see that the summary statement makes some very laudatory comments. They see that their priority score is darn good—160, 170, and the scores range to 500 [bottom in the NIH scoring system]. But they're not funded.

They did get approved, they did get a very good priority score. But there are insufficient financial resources to fund it. But they create some waves at times by making the allegation that there's something wrong with the peer-review system. There are some very good, excellent people, Nobel laureates, who are in this category now of approved but unfunded. They are the ones who generally resubmit to get that priority score moved from 170 to 120. That's a burden on the study section. The study section says, we saw this last time, we thought it was good, it got a 170 and didn't get funded.

NIH is trying to keep separate the study section review based on scientific and technical merit from the discussion and consideration by the councils and the institutes, which are based on the combination of scientific merit and funding and program relevance. The study section evaluation is made available to the council and the institute. The council provides advice to the institute, and it's the institute director who then makes the decision.

He has only a certain number of options. If the council recommends disapproval, the application cannot be funded; it is dead. If the council recommends it favorably, the institute director does not have to fund it. With many, he does not have the funds to make an award. But even if an application has the very best priority score, the council and the institute may skip over it to support something that has a somewhat poorer scientific rating.

For example, you can have a good scientific proposal concerning a relatively rare tropical disease. Scientifically, it's super stuff—excellent hypothesis, methods, and outstandingly competent investigators. But here is a proposal, dealing with AIDS, which isn't quite as good. It's at the level of the council and the institute that the decision will be made. They may say, let's tilt our funding resources toward the AIDS proposal.

Heavily Burdened Study Sections

SGR. *Many study section members say the workload is unrealistically heavy.*

Green. Workloads continue to increase. We've got about 1250-1300 study section members. We try to keep the load to about 70 or 75 applications for a study section meeting, which is generally two-and-a-half or three days, three times a year. There are about 15 to 20 members per section. Each application is assigned to at least two primary reviewers, who are responsible for a detailed review. Sometimes a third and a fourth are assigned, depending on the complexity and the the breadth of an application. More and more applications are being sent out to an individual scientist who is expert

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. . . Rising Resistance to Study Section Duties

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in that area for a mail review—not a member of the study section. Not infrequently, *ad hoc* people are asked to come to the study section and to sit with them and review the applications. They don't make motions or vote on priority scores.

Some study sections will have over 100 applications per meeting, and that is a big load. They will meet for a full three days, 11 hours a day. By the way, they are only paid for work done at the meetings—$100 a day honorarium, plus per diem, which went up on July 1 from $75 a day to $112, and that's it. Most of the nearby motels are $60 to $70 a day. The homework is uncompensated.

So, why do they do it? Because it's an honor. People put it in their resume. More importantly, it's an obligation to the system from which they derive their support. But a lot of them are discouraged. The workload is large. Members of study sections generally work the equivalent of three months a year for NIH. Add to that their concern that they're doing all of this work and only about a third of the applications they review and recommend are funded. They say they would feel so much better about it if there were more results. Then there are the occasional people who really have problems with compensation.

Reviewers Resigning

A fair number of people resign early. I don't know if that's increasing—we're looking into it. I'm surprised by the number who are declining invitations to join. It's running about 10 percent, which, I'm told by the old hands here, is an increase, but there's never been a careful study of it. But the 10-percent declination rate is particularly bothersome when there's an increasing workload. You can't use people over and over again. We're anxious to avoid the old-boys club.

Another factor is that the study section members are active scientists and grantees also, and, to some extent, many of them feel that they are at a competitive disadvantage. They think to themselves, I'm a member of the physiology study section. I'm about to submit my renewal application. Under the NIH rules, it cannot come to the physiology study section, and yet, that's where my applications have always been reviewed; that's where it should be reviewed. It will go to another study section that may be adequately constituted to review it. Or it may go to a special study section constituted to review that application.

This is our effort to prevent the reality or the appearance of an old-boy network. But, as far as study section members are concerned—who generally compete far better than average—they're put at a disadvantage.

***SGR.** Is the appeal mechanism often invoked by disappointed applicants?*

Green. No. What is fairly frequently invoked, now that the summary statement is made available to the investigator promptly, is a rebuttal. The study section has met, has made its recommendation, it's all been documented in the summary statement—called the pink sheet. The pink sheet is mailed out to the principal investigator before it has been considered by the advisory council; the second level of the two-level review has not occurred. So, there's an opportunity for the principal investigator to request redress if he thinks there's a real flaw [in the evaluation].

Contesting Scientific Judgments

The problem with the rebuttal system is that many times the disappointed investigator is appealing on the basis of a scientific judgment—this is so a great idea, he or she insists. That's not what we're talking about. The appeal and rebuttal system is not meant to establish a dialog in terms of scientific judgment. But if there has been inadequate attention to something, if the study section inadvertently made a gross error, it's meant to correct that kind of thing. Rebuttals come in in less than 10 percent of the applications.

***SGR.** How much does NIH spend on this reviewing system.*

Green. The budget for this division is now $20 million a year. We have a fulltime staff of 420. We recently looked at the average cost of reviewing a grant application—for research projects, research fellowships; some, in previous times, were for complex multi-disciplinary applications. In 1972, the average cost of reviewing an application was $1800 [in 1983 dollars]. That includes salaries and wages of staff here, travel of consultants, their honorariums, the print shop for duplicating applications—the whole ball of wax. In 1983, the cost was $950 per application. So, the cost has come down almost half.

Why? First of all, there's an economy of size. The average study section is reviewing more applications. A study section used to be manned by an executive secretary plus two support people. Now, with computers and word processors, it's one executive secretary and one assistant. Another reason is that we're not conducting site visits nearly as frequently as we used to. There's less of that, but not primarily because of a lack of funds. We're doing a better job of recognizing whether an application has enough information or detail, and we're contacting the investigator and saying that the study section is going to want more information about how you're going to measure such and such.

To the Editor

It was unfair of you to contrast the sale of the *Science86* subscription list with the sale of Scientific American, Inc., in your interview with Bill Carey [Executive Officer of the American Association for the Advancement of Science (SGR Vol. XVI, No. 13)]. The two transactions were in no way cognate.

We were not compelled to our sale—no matter what the less-well-informed press published—by the economic difficulties encountered by our magazine; these the magazine will weather as it has weathered such difficulty before. It was to protect the interest of shareholders against the threat of a take-over in which some shareholders might have received more (and some, less) for their shares that we proceeded to what has proven to be a well-managed auction of a going business. Under its new ownership [Holzbrinck, a West German publishing firm], our company goes on now to the greater future it has had ahead of it all through the incidental crisis of ownership.

Science86 was a brave venture on which Bill Carey, no less than [editor] Allen Hammond, put his name on the line. What made life impossible for it was the launching, by two giant commercial publishers [Time Inc. (*Discover*) and the Hearst Corp. (*Science Digest*)], of magazines aimed into the same market. When the chips were finally down—given the non-appearance of venture capital to carry *Science86* forward—the subscription list (a $7-million liability on the AAAS books) was all that there was to sell. The Micawber proposition from Hammond *et al.* that something was bound to turn up had to meet with the schedule at which the *Science86* assets were wasting.

Bill Carey had to make the rational decision against his own hope and wish. He drove a decent bargain with Time Inc. He does not belong in your zoo of pettifogging and perfidious individuals who carry on their careers under the camouflage of virtue and public service supplied by their identification with the scientific enterprise.

Otherwise, my compliments.

Gerard Piel
Chairman, Scientific American, Inc.
Retiring President and Chairman, AAAS

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Looseleaf binders suitable for holding two annual volumes of *Science & Government Report* are available for $8.95 each, including postage. To order: SGR, PO Box 6226, Washington, DC 20015. Please include payment with order.

In Print

The following publications deal with matters of interest to the science-policy community. Copies are available as indicated (not from SGR.)

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From the National Science Foundation, Division of Science Resources Studies, 1800 G St. Nw., Washington, DC 20550; tel. 202/634-4622:

Federal R&D Funding by Budget Function, Fiscal Years 1985-87 (87 pages, no charge), heaps of numbers showing what the federal government spends its R&D money on; the figures reflect the theme of Reaganite R&D policy, as proposed in the presidential budget for fiscal 1987—defense R&D up by $8.5 billion, or 23 percent, to a record $45 billion, a near-tripling since Reagan took office; non-defense R&D down $395 million, or 2 percent, to about $17 billion, which is about where it stood in 1981.

International Science and Technology Data Update 1986, (NSF 86-307, 60 pages, no charge), latest published data comparing US with France, West Germany, Japan, and Britain in R&D expenditures, share of GNP devoted to civilian and defense, R&D, employment of scientists and engineers.

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From the Superintendent of Documents, USGPO, Washington, DC 20404; 202/783-3238 (GPO Stock No. 052-003-01038-1)—Report of the Office of Technology Assessement:

Electronic Record Systems and Individual Privacy (152 pages, $7.50), a major OTA report, prepared at the request of House and Senate committees, this is the third in a series of OTA studies on information technology and civil liberties; it concludes that the huge amounts of personal information currently stored in various government data banks are not well protected from prying and that "neither Congress nor the executive branch is providing a forum in which the privacy, management efficiency, and law-enforcement implications of Federal electronic record system applications can be fully debated and resolved."

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From the US Government Accounting Office, PO Box 6015, Gaithersburg, Md. 20877; tel. 202/275-6241:

Patent Policy: Universities' Research Efforts Under Public Law 96-517 (GAO/RCED-86-93, 15 pages, no charge), summarizes responses from 19 major universities on the effects of the 1980 legislative amendments permitting universities and other non-profit organizations to retain title to inventions from federally sponsored research.

Seeking Goodies on Capitol Hill—MIT Style

Having listened for years to pious and surly contentions between universities that excel in getting federal R&D funds and those that do not, SGR is enchanted by a copy of a letter supplied by a friendly mole. Written in 1983, it is from MIT President Paul E. Gray to an alumnus, who is not our supplier, nor will he be named.

For useful background, it is to be noted that MIT is second among the nation's universities in receipts of federal R&D funds—$178 million listed for 1984; probably over $200 million this year. President Gray has supported strong statements against universities using political connections to obtain R&D money on Capitol Hill. MIT is a member of the fat-cat Association of American Universities (AAU), which last April reaffirmed a 1983 statement that, in part, urged politicians, university administrators and scientists "to refrain from actions that would make scientific decisions a test of political influence rather than a judgment on the quality of the work to be done."

The Gray-to-alumnus letter commences with warm thanks for hospitality and then refers to discussions that apparently took place concerning pork-barrel depredations by Columbia and Catholic universities.

"I share the general view of the AAU presidents," Gray wrote, "that we must proceed with caution and considerable restraint in moving through purely political channels to develop support for scientific projects at individual universities. If this becomes the established mode of operation, it will be a bloody free-for-all, and the devil will take the hindmost.

"The competition will not be limited to the fifty premier research institutions which belong to the AAU," Gray's letter continued, "and it is, perhaps, those institutions which have the most to lose if funding of science comes to operate in a way analagous to the funding of river and harbor improvements . . . . "

The letter then goes on to discuss the influential positions of three House members from Massachusetts:

"You're quite right," Gray wrote, "that the conjunction of [Silvio O.] Conte [ranking Republican on the Appropriations Committee], [Edward P.] Boland [Chairman of the Appropriations Subcommittee for NSF and NASA] and [House Speaker] O'Neill represents an unusual concentration of political power, and MIT is not ignoring it.

"Each of these individuals has been unfailingly helpful to us in matters related both to MIT in the narrow sense and to the research universities in the broader interests of education and research. Their assistance has been invaluable, and we continue to encourage it. For example, on Tuesday, November 1, the Speaker hosted a Congressional breakfast for the Massachusetts delegation to meet Dave Saxon [President of the MIT Corporation], and we had an excellent opportunity there to discuss MIT's interests with eight members of the delegation, including the three mentioned above . . . . "

Lacking specific details on what was discussed with these House eminences, the Gray letter falls short of the smoking-gun standard. Nonetheless, it does stand out as an odd composition from a member of what might be termed the pork-barrel temperance society. SGR sought twice to discuss these matters with President Gray, but our telephone calls have gone unreturned. —DSG

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SGR Summer Schedule

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